Species Status Assessment

Common Name: Little bluet **Date Updated:** March 2025

Scientific Name: *Enallagma minusculum* **Minor Edits By:** NYSDEC Wildlife Section

Class: Insecta

Family: Coenagrionidae

Species Synopsis *(a short paragraph which describes species taxonomy, distribution, recent trends, and habitat in New York):*

The distribution of the little bluet (*Enallagma minusculum*) encompasses North Carolina, the northeastern United States, and southeastern Canada (Nikula *et al.* 2003). More specifically, the species is found in North Carolina, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia, and Prince Edward Island (NatureServe 2012, Abbott 2007). In New York, *E. minusculum* is now known to occur at three locations, two in Suffolk County and one in Queens County (New York Natural Heritage Program 2010). The species is known to inhabit ponds and lakes with sandy substrate, mainly coastal plain ponds with emergent vegetation along the shoreline (Carpenter 1991, Lam 2004).

DEC is not aware of any additional data or new information on population trends or threats to this species since the last SWAP revision in 2015 to indicate a need for change in SGCN status

I. Status

a. Current legal protected Status

i. **Federal:** Not listed **Candidate:** No

ii. **New York:** Threatened

b. Natural Heritage Program

i. **Global:** G4

ii. **New York:** S1 **Tracked by NYNHP?:** Yes

Other Ranks:

-NYS 2025 SGCN Status: HPSGCN

-IUCN Red List: Least Concern

-Northeast Regional SGCN: RSGCN

Status Discussion:

White *et al.* (2010) suggests that the status remain S1 (5 or fewer occurrences, or few remaining acres or miles of stream, or factors demonstrably making it especially vulnerable to extinction rangewide or in New York State).

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Unknown	Unknown			-
Northeastern US	Yes	Unknown	Stable			-
New York	Yes	Unknown	Declining	2005-2009	T	Yes
Connecticut	Yes	Unknown	Unknown		SC	Yes
Massachusetts	Yes	Unknown	Unknown			Yes
New Jersey	No	-	-			-
Pennsylvania	No	-	-			-
Vermont	No	-	-			-
Ontario	No	-	-			-
Quebec	No	-	-			-

Column options
Present?: Yes; No; Unknown; No data; (blank) or Choose an Item
Abundance and Distribution: Declining; Increasing; Stable; Unknown; Extirpated; N/A; (blank) or Choose an item
SGCN?: Yes; No; Unknown; (blank) or Choose an item

Monitoring in New York *(specify any monitoring activities or regular surveys that are conducted in New York):*

Most ponds known to support, formerly support, or in close proximity to such ponds, were surveyed as part of a special project portion of the New York State Dragonfly and Damselfly Survey (NYSDDS) from 2005-2009. Given that this species may exist at a single pond in New York State, with significant threats; at minimum, some type of periodic monitoring of Wildwood Lake is warranted.

Trends Discussion *(insert map of North American/regional distribution and status):*

The population at one Suffolk County location was estimated to have excellent viability in 2009, with an estimated 868 individuals observed (New York Natural Heritage Program 2011, White *et al.* 2010). Population estimates have not been made for other sites (two other Suffolk County locations where they may no longer be present and one Queens County location which is largely uninvestigated at present). Information on the species prior to the late 1990s is very limited, with documented observations at just two sites prior to 1995 (Donnelly 1999, New York Natural Heritage Program 2011).

Recent observations since 1995 have been noted in Suffolk and Queens county sites and the species had been observed at one of three extant sites prior to 1926 (New York Natural Heritage Program 2011). Little bluets were documented historically at two additional sites on Long Island, but have not been seen there in recent years and long-term information regarding population size is not available prior to the late 1990s (Donnelly 1999, New York Natural Heritage Program 2011). Observations are fairly recent and long-term trends are unclear, but the apparent disappearance at some sites indicates a decline in site occupancy at the very least.

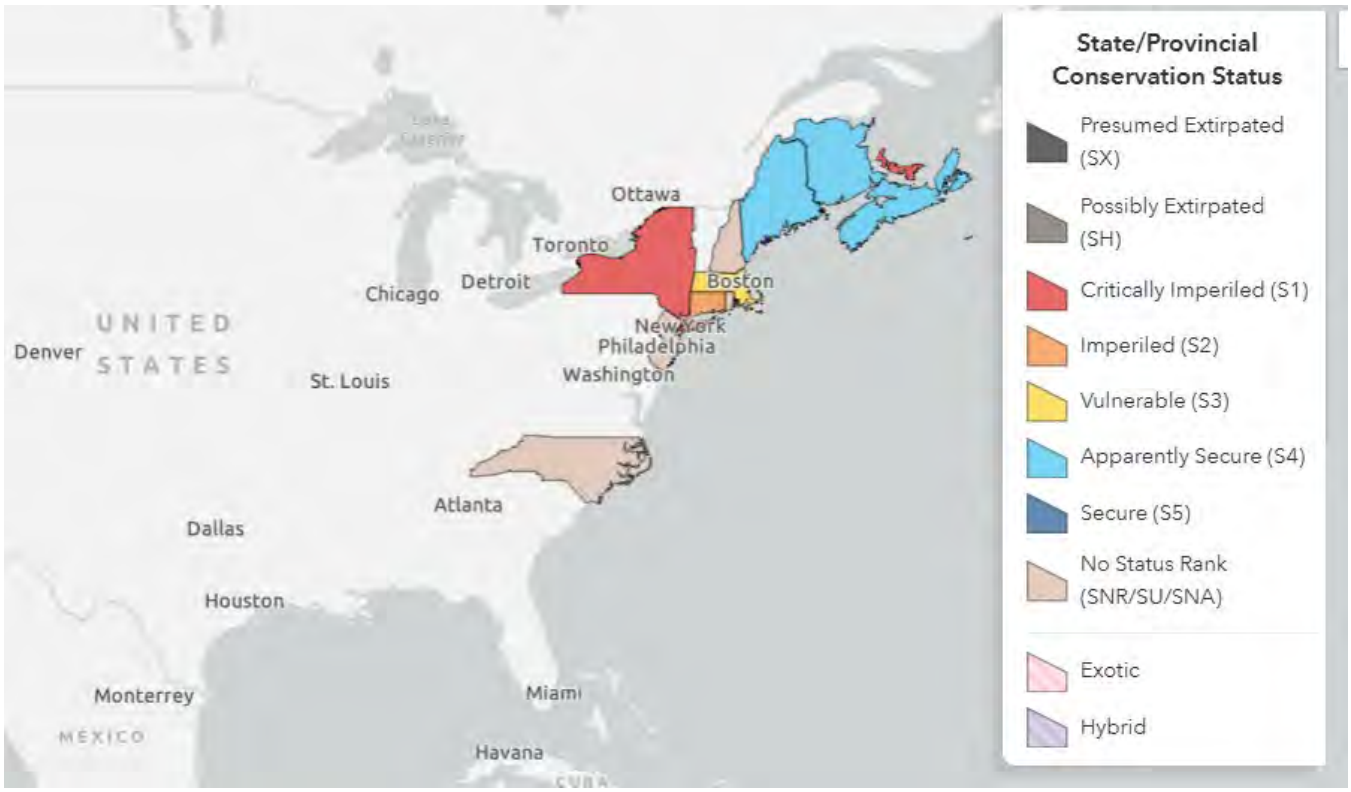

Figure 1. Conservation Status of *Enallagma minusculum* in North America (NatureServe 2025).

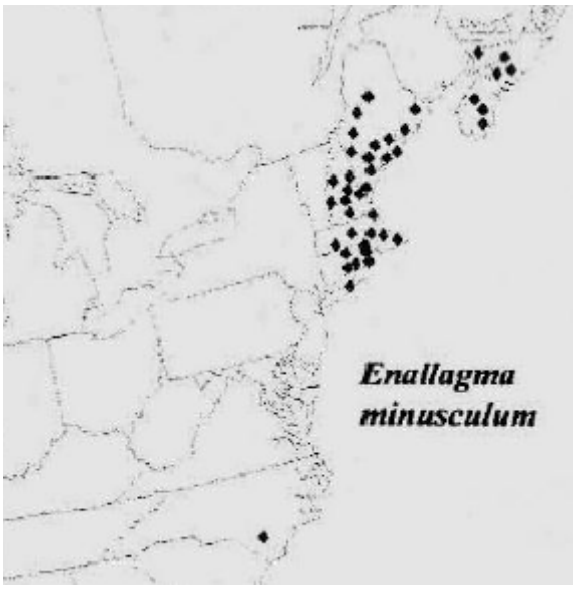

Figure 2. Distribution of the little bluet in the United States (Donnelly 2004).

III. New York Rarity *(provide map, numbers, and percent of state occupied)*

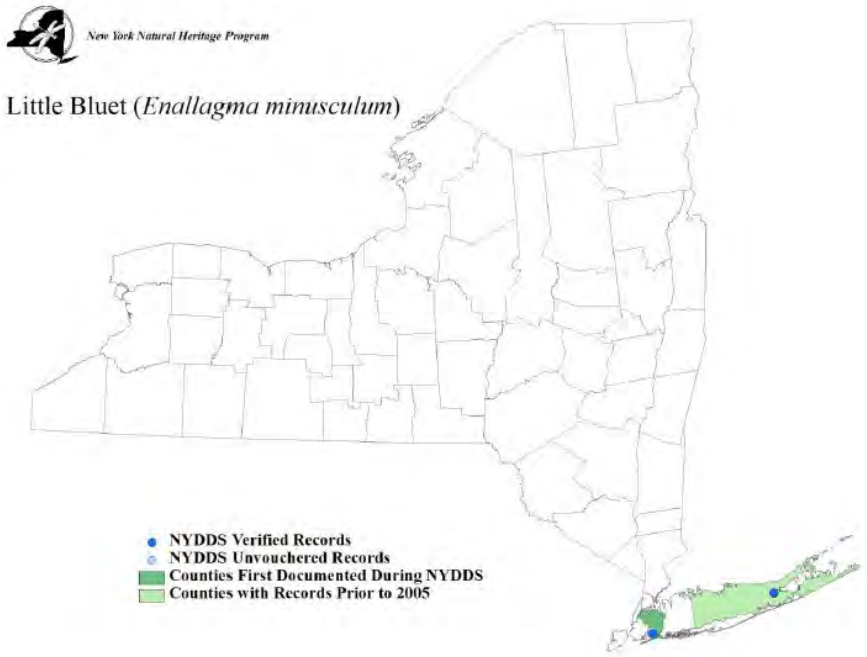

Figure 3. Occurrence records of the little bluet in New York (White *et al.* 2010).

Details of historic and current occurrence:

Historic:

Wading River and Long Pond (Donnelly 1992)

Current:

1993 Lake Panamoka (but not found in 2007 or 2009)
2008 Big Johns Pond
2009 Wildwood Lake Riverhead: 868 individuals observed

Second number of occurrences obtained from the map by White *et al.* (2010) using data collected during The New York Dragonfly and Damselfly Survey 2005-2009.

New York's Contribution to Species North American Range:

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	~300mi

Column options
Percent of North American Range in NY: 100% (endemic); 76-99%; 51-75%; 26-50%; 1-25%; 0%; Choose an item
Classification of NY Range: Core; Peripheral; Disjunct; (blank) or Choose an item

IV. Primary Habitat or Community Type *(from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):*

a. Lacustrine, coastal plain, sand/gravel bottom

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/Increase
Yes	No	Declining	

Column options
Habitat Specialist and Indicator Species: Yes; No; Unknown; (blank) or Choose an item
Habitat/Community Trend: Declining; Stable; Increasing; Unknown; (blank) or Choose an item

Habitat Discussion:

E. minusculum inhabit ponds and lakes with sandy substrate, mainly in coastal plain areas with emergent vegetation along the shoreline (Carpenter 1991, Lam 2004), although the recently completed new Hampshire Dragonfly Survey (Hunt 2012) found them occurring far north of the coastal plain in New Hampshire. The largest Long Island population is known from a coastal plain pond which contains the following emergent plants: three-square bulrush (*Schoenoplectus pungens*), jointed rush (*Juncus articulatus*), many-flowered pennywort (*Hydrocotyle umbellata*), seven-angle pipewort (*Eriocaulon aquatic*), and golden hedge-hyssop (*Gratiola aurea*). The pond is surrounded by a wooded upland as well as residences (New York Natural Heritage Program 2010).

V. Species Demographic, and Life History:

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/ Catadromous?
Yes	-	-	Yes	Yes	-

Column options
First 5 fields: Yes; No; Unknown; (blank) or Choose an item
Anadromous/Catadromous: Anadromous; Catadromous; (blank) or Choose an item

Species Demographics and Life History Discussion *(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):*

Females oviposit in floating or emergent vegetation on ponds while "in tandem" or coupled with males after mating (Nikula *et al.* 2003). This behavior is not unique to this species, but not all damselflies do this. This strategy reduces competition from other males: A male ensures that other males cannot mate with a female before she lays her eggs (New York Natural Heritage Program 2011).

In Maine, the flight season is from mid-June through late August (Brunelle and deMaynadier 2005), while New Hampshire flight dates run from May 27 through August 23 with the majority of the records from the beginning of July through the first third of August (Hunt 2012). Connecticut reports adults from early June through mid-August (Lam 2004) and New York dates for confirmed observations span from 4 June to 14 July (NewYork Natural Heritage Program 2010).

VI. Threats *(from NY 2015 SWAP or newly described):*

The habitat of the largest population of *E. minusculum* in New York (Suffolk County) is surrounded by residential development and is used for recreation, where trampling of pond vegetation has been observed (New York Natural Heritage Program 2011). In 2009, invasive Asiatic clams (*Corbicula corbicula*) were found at this location and monitoring the site every two years with a threat assessment is suggested (White *et al.* 2010). Any activity that causes water contamination or the alteration of natural hydrology could impact *E. minusculum* populations (NYS CWCS 2006). Such threats might include roadway and agricultural run-off, ditching and filling, eutrophication and nutrient loading from fertilizers and septic systems, changes in dissolved oxygen content, and development (NYS DEC 2005). Groundwater withdrawal is a potential threat in lentic habitats on Long Island, as are invasive plant species replacing native plants required for oviposition (New York Natural Heritage Program 2011). Both emergence rates and/or species ranges may shift for odonate species as a result of climate change (Kalkman *et al.* 2008).

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.1 Housing & Urban Areas	(habitat loss from lakeside development)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
2. Agriculture & Aquaculture	7.2 Dams & Water Management/Use	(alteration of natural hydrology)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.1 Domestic & Urban Wastewater	9.1.1 Domestic wastewater (lawn care)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	8.1.3 Aquatic animals (grass carp)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	8.1.4 Aquatic plants (Phragmites)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 1. Threats to *Enallagma minusculum*

Are there regulatory mechanisms that protect the species or its habitat in New York?

Yes: ü **No: _____** **Unknown: _____**

If yes, describe mechanism and whether adequate to protect species/habitat:

The little bluet is listed as a threatened species in New York and is protected by Environmental Conservation Law (ECL) section 11-0535 and the New York Code of Rules and Regulations (6 NYCRR Part 182). A permit is required for any proposed project that may result in a take of a species listed as Threatened or Endangered, including, but not limited to, actions that may kill or harm individual animals or result in the adverse modification, degradation or destruction of habitat occupied by the listed species.

The Freshwater Wetlands Act provides protection for wetlands greater than 12.4 acres in size under Article 24 of the NYS Conservation Law.

Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:

Any efforts to reduce roadway and agricultural run-off, eutrophication, development of upland borders to ponds and resulting increased groundwater withdrawal, invasive plant and animal species, trampling of vegetation from recreation, and ditching and filling activities should be considered when managing for *E. minusculum* (NYS CWCS 2006, White *et al.* 2010). Maintenance or restoration of native shoreline vegetation and surrounding upland habitat at Wildwood Lake and Lake Panamoka will benefit this species, as females require native emergent vegetation for successful reproduction and spend much of their time in upland habitats away from the breeding pond (Gibbons *et al.* 2002, White *et al.* 2010).

Further inventory is needed to define the extent of populations of little bluets in New York. In particular, gaining certainty on whether they still occur at lake Panamoka and better information on the Queens County site are needed. In addition, research is required to understand the habitat requirements and threats to this species. In particular, the impact of the newly arrived invasive Asiatic clam (*Corbicula corbicula*) at a Suffolk county site should be evaluated through monitoring and a threat assessment (White et al. 2010). A recovery plan for the species should be developed and appropriate management guidelines should be adopted for its persistence in known locations (NYS DEC 2005).

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct habitat management	Site/Area management
A.1 Direct Habitat Management	A.1.1.0.0 Manage plants, animals, fungi, or bacteria	Invasive/Problematic species control
B.3 Outreach	B.3.1.4.0 Public outreach and information	Awareness & Communications
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation planning	Site/Area Protection
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation planning	Resource/Habitat Protection
C.6 Design and Plan Conservation	C.6.5.1.3 Develop a conservation, management, or restoration plan for protected private lands	Habitat/Natural process restoration

Table 2. Recommended conservation actions for *Enallagma minusculum*

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for odonates of coastal lakes and ponds, and for the little bluet in particular.

Educational signs:

____ Educate the public not to introduce fish into historically fishless coastal plain ponds or new species of fish into coastal plain ponds where the species did not historically occur.

Habitat management:

____ Reduce or eliminate detrimental ATV use in and around coastal plain ponds supporting state threatened damselflies.

____ Where possible, remove introduced fish or other aquatic animals that may be detrimental to odonate populations through excessive predation on larvae.

____ Where possible, remove invasive, non-native plants from ponds and adjacent uplands that may significantly impact larval and adult odonate survival and reproduction.

Habitat monitoring:

____ Identify existing and potential locations of public water supply wells and ensure that present and future water withdrawals will not alter the normal range of variation of ground and pond water elevation.

____ Support and encourage habitat monitoring efforts that would complete the baseline assessment of habitat quality and threats.

____ Identify existing and potential sources of invasive species (including fish).

____ Compile existing baseline data on habitat quality and threats. Include pond water quality (pH, conductivity, nutrients, toxins), pond hydrographs (fluctuations in water level with time), presence of fish, presence of characteristic native plants and invasive species, history of ATV use, history of pesticide spraying for mosquito control, extent of upland habitat around each pond.

Habitat research:

____ Support and encourage research that would increase knowledge of the impact of poorly known threats to odonates (e.g. water quality degradation, atmospheric deposition, invasive species, pesticide spraying).

____ Support and encourage research projects that will help define preferred habitat in order to guide future monitoring, restoration and habitat protection efforts. Include both pond and adjacent upland habitats.

Habitat restoration:

____ Wherever possible, fill in non-natural , deep water-retaining holes in coastal plain ponds.

____ Identify existing and potential sources of nutrients, toxins, and other chemicals originating from human activities and reduce/eliminate/prevent these where possible.

Modify regulation:

____ Ensure that aerial pesticide spraying does not occur over or in close proximity to ponds and adjacent uplands that support these state listed damselflies during the period of adult emergence and flight.

____ Modify regulations to provide expanded protection for uplands adjacent to coastal plain ponds that support state threatened damselflies.

Population monitoring::

____ Conduct surveys to obtain repeatable, relative abundance estimates for these species at known sites and newly discovered sites where access permission to conduct surveys is obtained (as indicated in the State Wildlife Grant Odonate Inventory Project).

Statewide baseline survey:

____ Conduct surveys for these species at potential sites throughout the state (expected range for these species is Long Island and Lower New England ecoregion, possibly Westchester County only). These species are known from fewer than 10 locations in the state, but new populations probably remain to be discovered for all of the species. A currently approved, but not yet begun State Wildlife Grant Statewide Odonate Inventory Project will utilize volunteers, Natural Heritage Program and other staff to conduct these surveys.

VII. References

Murtaugh, Jenny. 2012. *Enallagma minusculum* Status Assessment for the 2015 New York State Wildlife Action Plan. NYSDEC. Albany, New York.

NatureServe. 2025. NatureServe Explorer. Page last published 2/28/25. https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.120754/Enallagma_minusculum. Accessed March 24, 2025.

Abbott, J.C. 2007. OdonataCentral: An online resource for the distribution and identification of Odonata. Texas Natural Science Center, The University of Texas at Austin. <http://www.odonatacentral.org>. Accessed 10 October 2012.

Brunelle, P.-M. and P. G. deMaynadier. 2005. The Maine damselfly and dragonfly survey. A final report. A report prepared for Maine Department of Inland Fisheries and Wildlife (MDIFW).

Carpenter, V. 1991. Dragonflies and damselflies of Cape Cod. The Cape Cod Museum of Natural History, Brewster, Massachusetts.

Donnelly, T. W. 1992. The Odonata of New York. Bulletin of American Odonatology 1(1):1-27.

Donnelly, T. W. 1999. The dragonflies and damselflies of New York. Prepared for the 1999 International Congress of Odonatology and 1st Symposium of the Worldwide Dragonfly Association. Colgate University, Hamilton, NY.

Donnelly, T. W. 2004. Distribution of North American Odonata, Part III: Calopterygidae, Lestidae, Coenagrionidae, Protoneuridae, Platystictidae. Bulletin of American Odonatology

8:33-99.

Gibbons, L. K., J. Michael Reed, and F. S. Chew. 2002. Habitat requirements and local persistence of three damselfly species (Odonata: Coenagrionidae). Journal of Insect Conservation 6:47-55.

Hunt, P. 2012. The New Hampshire Dragonfly Survey: A Final Report. Report to the NH Fish and Game Department. Audubon Society of NH, Concord.

Kalkman, V. J., V. Clausnitzer, K. B. Dijkstra, A. G. Orr, D. R. Paulson, and J. van Tol. 2008. Global diversity of dragonflies (Odonata) in freshwater. Hydrobiologia 595:351-363.

Lam, E. 2004. Damselflies of the northeast. A guide to the species of eastern Canada and the northeastern United States. Biodiversity books, Forest Hills, New York.

NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 10 October 2012.

New York State Department of Environmental Conservation. (2006). *New York State Comprehensive Wildlife Conservation Strategy*. Albany, NY: New York State Department of Environmental Conservation.

New York Natural Heritage Program. 2010. Element Occurrence Database. Albany, NY.

New York Natural Heritage Program. 2012. Element Occurrence Database. Albany, NY.

New York Natural Heritage Program. 2011. Online Conservation Guide for *Enallagma minusculum*. < http://acris.nynhp.org/guide.php?id=8332>. Accessed 10 October 2012.

Nikula, B., J. L. Loose, and M. R. Burne. 2003. A field guide to the dragonflies and damselflies of Massachusetts. Massachusetts NHESP, Westborough, MA.

White, E. L., J. D. Corser, and M. D. Schlesinger. 2010. The New York dragonfly and damselfly survey 2005-2009: Distribution and status of the odonates of New York. New York Natural Heritage Program, Albany, New York.

Experts Consulted: Paul Novak, NYSDEC Wildlife Biologist, Region 4

Originally prepared by	Jenny Murtaugh
Date first prepared	October 10, 2012
First revision	Samantha Hoff (February 4, 2014)
Latest revision	